

ABSTRACT OF THE DISCLOSURE

A network switch that includes an address resolution table and a VLAN table. The address resolution table comprises a VLAN identifier (ARL VID) in less significant bits, a MAC address, and an action code, wherein each VLAN identifier in the address resolution table is unique. The VLAN table is used for storing information related to frame forwarding. The VLAN table includes a VLAN identifier (VLAN VID) in more significant bits, a forward map and an un-tag map. The ARL VID is used to access an associated entry in the VLAN table.